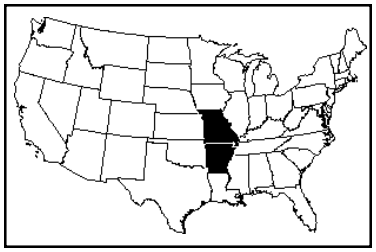

The Missouri bladderpod is found in southwest Missouri and northern Arkansas.

Photos by Jim Rathert, Missouri Department of Conservation

Missouri Bladderpod

The Missouri bladderpod is an *endangered species.* Endangered species are animals and plants that are in danger of becoming extinct. *Threatened species* are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

What is the Missouri bladderpod?

Scientific Name - *Lesquerella filiformis*

Appearance - The Missouri bladderpod is a small annual plant, about 4 to 8 inches tall, with many slender stems that grow from a cluster of leaves at the base of the plant. The stems and leaves of the bladderpod are covered with small hairs that give the plant a silvery look. Distinctive canary-yellow flowers cluster at the top of the stems and bloom from April to May. The flowers have four yellow petals and produce round green seedpods (1/8 inch in diameter) that turn brown as they dry. After flowering and seeding the plant dies. Seeds germinate in fall and survive the winter as button-sized rosettes, which look like clusters of leaves on the ground.

Range - The Missouri bladderpod is restricted to southern Missouri and northern Arkansas. It was probably never found beyond this range but was known from only nine sites in three counties when it was first listed as endangered in 1987. After additional surveys were conducted and actions undertaken to conserve the bladderpod, the number of documented populations increased to 61 sites in 4 counties in Missouri and 2 sites in 2 counties in Arkansas.

Habitat - Natural habitat for Missouri bladderpods is primarily open limestone glades; but it has been found on one dolomite glade in Arkansas. Glades are naturally dry, treeless areas with shallow, loose soil and areas of exposed rock. Glades are described by the underlying rock (e.g., limestone or dolomite). Sometimes the bladderpod is found on highway rights-of-way and pastures where mowing and grazing have kept the area open. Occasionally they are found in open rocky woods.

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What is the Missouri bladderpod? (cont'd.)

Reproduction - Seeds of the Missouri bladderpod germinate in the fall, then overwinter as basal rosettes (i.e., a cluster of leaves on the ground). The plant blooms in spring from April through May and dies by late June. Seeds produced during spring survive the hot summer by lying dormant. They then germinate in the fall, starting the cycle over again. However, this life cycle varies from year to year depending on weather and soil conditions. Under ideal conditions, bladderpods are numerous and broadly distributed across available habitat, and individual plants have more stems and more flowers. In contrast, under unfavorable conditions, there may be few to no plants at a site for one to several years. However, some seeds that didn't germinate will remain viable, and will grow in a year or more later when conditions are favorable.

Why is the Missouri Bladderpod endangered?

Habitat Loss - The natural glade habitat of the Missouri bladderpod is threatened with residential development, overgrazing, and competition from encroaching woody and non-native grasses.

Fire Control - Historically, natural disturbances such as fire kept the glades open and free of trees and shrubs. With aggressive control and prevention of wild fires, woody plants and introduced grasses have invaded glades. The Missouri bladderpod can only grow in open areas; they cannot compete with these plants. Thus they die out when glades are overgrown with species such as red cedar, cheat grass, and fescue.

Roadside Maintenance - Some bladderpod populations are found on roadsides and could be threatened by herbicides or mowing.

What is being done to prevent extinction of the Missouri Bladderpod?

Listing - The Missouri bladderpod was added to the federal List of Endangered and Threatened Wildlife and Plants on January 8, 1987 as an endangered species. As a result of this listing, the U.S. Fish & Wildlife Service prepared a Recovery Plan that identified priority conservation actions. Those actions include protecting and monitoring existing populations, surveying for new populations, habitat protection, and public education. Progress being made toward recovery has prompted the Service to propose reclassifying the bladderpod from endangered to threatened.

Research - Research has focused on environmental conditions that affect germination and survival. This knowledge was used to develop appropriate management for the species, including prescribed burns every three to five years in August. These burns remove organic debris and set back woody vegetation. They apparently do not harm Missouri bladderpods because the seeds have not yet germinated.

Habitat Protection and Management - A number of Missouri bladderpod populations are on public land that is now managed to protect this species. Additional sites have been purchased by conservation organizations and government agencies to ensure that the site remains protected and properly managed. Also, the Missouri Department of Conservation and The Nature Conservancy have worked with private landowners to explain the habitat needs of the Missouri bladderpod and to provide landowners with suggestions on glade management.

What can I do to help prevent the extinction of species?

Learn - Learn more about the Missouri bladderpod and other endangered and threatened species. Understand how appropriate habitat management protects endangered and threatened species and our nation's plant and animal diversity. Tell others about what you have learned.

Grow Natives - Grow native plants in your lawn and garden but obtain plants from local nurseries, do not dig up native plants from natural areas. Avoid the use of invasive, non-native plants.

Updated May 2003